THE

Maryland Agricultural College QUARTERLY

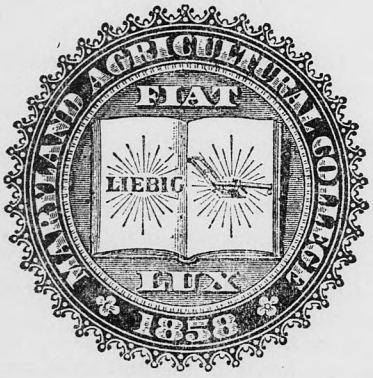
ENTERED AT COLLEGE PARK (MD.) POST OFFICE AS SECOND-CLASS MATTER

No. 58. NOVEMBER 1912.

FEED STUFF ANALYSES

R. W. SILVESTER, President

Edited by H. B. McDONNELL, State Chemist



Published for the Benefit of Agriculture, and Sent Free to Anyone Desiring a Copy

Issued in the Months of February, May, August and November

ADDRESS

Chemical Department, Maryland Agricultural College

COLLEGE PARK, MD.

ANALYSES OF

Commercial Feeding Stuffs Sold in Maryland

BY THE CHEMICAL DEPARTMENT OF

The Maryland Agricultural College

Dr. H. B. McDonnell, Professor of Chemistry,—State Chemist.
L. B. Broughton, M. S., Assistant Professor of Chemistry.
T. D. Jarrell, B. S., First Assistant Chemist.
A. C. Adams, B. S., Assistant Chemist.
Alfred Nisbet, Assistant Chemist.
D. C. Oudshoorn, Assistant Chemist.
Arthur M. Gibson, Assistant Chemist.
F. G. Baggs, Clerk.

The tables on the following pages are made up of the results of the analysis of feeds made at the College from June to November, 1912, inclusive.

The terms used in the analysis have been explained in previous bulletins, also the average analysis of standard feeds.

The following definitions are those recently revised and adopted by the Association of Feed Control Officials:

Alfalfa Meal is the entire alfalfa hay ground, and does not contain an admixture of ground alfalfa straw or other foreign materials.

Blood Meal is ground dried blood.

Brewers' Dried Grains are the properly dried residues from cereals obtained in the manufacture of beer.

Buckwheat Shorts or Buckwheat Middlings are that portion of the buckwheat grain immediately inside of the hull after separating from the flour.

Chop is a ground or chop feed composed of one or more different cereals or by-products thereof. If it bears a name descriptive of the kind of cereals, it must be made exclusively of the entire grains of those cereals.

Clipped Oat Refuse (term oat clippings not recognized) is the resultant by-product in the manufacture of clipped oats. It may contain light, chaffy material broken from the ends of the hulls, empty hulls, light, immature oats and dust. It must not contain an excessive amount of oat hulls.

Corn Bran is the outer coating of the corn kernel.

Corn Feed Meal is the sifting obtained in the manufacture of cracked corn and table meal made from the whole grain.

Cornstarch By-Product with corn bran is that portion of commercial shelled corn that remains after the separation of the larger part of the

starch and the germ by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Cornstarch By-Product without corn bran is that part of commercial shelled corn that remains after the separation of the larger part of the starch, the germ and the bran by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Cottonseed Feed is a mixture of cottonseed meal and cottonseed hulls, containing less than 36 per cent of crude protein, and shall be plainly marked, "Mixture of cottonseed meal and cottonseed hulls."

Cottonseed Meal is a product of the cottonseed only, composed principally of the kernel, with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be recognized as cottonseed meal that does not conform to the requirement above set forth and that does not contain at least 36 per cent of protein.

Choice Cottonseed Meal must be finely ground, not necessarily bolted, perfectly sound and sweet in odor, yellow, free from excess of lint, and must contain at least 41 per cent of protein.

Prime Cottonseed Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellow, not brown or reddish, free from excess of lint, and must contain at least 38.6 per cent protein.

Good Cottonseed Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color and must contain at least 36 per cent of protein.

Cracklings are the residue after partially extracting the fats and oils from the animal tissue. If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Digester Tankage is the residue from animal tissue exclusive of hoof and horn specially prepared for feeding purposes by tanking under live steam, drying under high heat, and suitable grinding. If it contains any considerable amount of bone, it must be designated digester meat and bone tankage.

Distillers' Dried Grains are the dried residue from cereals obtained in the manufacture of alcohol and distilled liquors. The product shall bear the designation indicating the cereal predominating.

Flax Plant By-Product is that portion of the flax plant remaining after the separation of the seed, the baste fiber and a portion of the shives, and consists of flax shives, flax pods, broken and immature flax seeds and the corticle tissue of the stem.

Grits are the hard, flinty portions of Indian corn without hulls and germ.

Hominy Meal, Hominy Feed, or Hominy Chop is a mixture of the bran coating, the germ and a part of the starchy portion of the corn kernel obtained in the manufacture of hominy grits for human consumption.

(Continued on Page 8.)

ANALYSIS OF FEEDING STUFFS.

No.	Name of Manufacturer or agent.	Name of Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract.		Crude Fibre.	
				FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
24621	Ajax Milling & Feed Co., New York, N. Y.	Ajax Flakes.....	Fallston.....	30.89	30.00	13.57	11.00	10.79	
24617	American Linseed Co., New York, N. Y.	Old Process Oil Meal...	Taneytown	36.86	32.00	8.70	5.00	7.49	5.50
24641	American Maize Products Co., New York, N. Y.	Cream of Corn Gluten Feed.....	Baltimore.....	25.54	23.00	3.50	2.50	5.85	3.50
24640	American Milling Co., Chicago, Ill.	Amco Horse Feed.....	Perryman.....	10.44	10.00	3.79	3.50	7.03	
24635	" " "	Sucrene Alfalfa Horse & Mule Feed.....	Perryman....	12.64	11.00	3 34	2.00	12.83	
24612	" " "	Sucrene Dairy Feed...	Bethesda.....	17.46	16.00	4.50	3.50	11.22	12.00
24576	M. F. Baringer, Philadelphia, Pa.	Dried Brewers Grains	Rising Sun....	26.41	25.00	3.55	6.00	13.61	15.00
24584	W. P. Battle & Co., Memphis, Tenn.	Battle Brand Choice Cotton Seed Meal.....	Annapolis.....	40.54	41.00	8.11	6.00	7.07	10.00
24622	Baugh & Sons Co., Baltimore, Md.	Meat Meal for Poultry..	Baltimore.....	51.05	50.00	19.19	14.00	1.28	1.00
24653	Berg Co., Philadelphia, Pa.	Three Medal Poultry Meal.	Annapolis.....	46.16	50.00	13.04	13.00	1.20	1.00
24577	J. W. Biles Co., Cincinnati, Ohio.	Union Grains Ubiko Ready Dairy Ration	Rockville.....	25.01	24.00	6.60	7.00	9.22	9.00
24642	J. Bolgiano & Son, Baltimore, Md.	Square Deal Beef Scrap	Baltimore.....	58.44	50.00	13.28	12.00	1.86	1.00
24594	" " "	Square Deal Chick Starter.....	Baltimore.....	11.23	10.05	4.44	3.57	3.20	2.70
24595	" " "	Square Deal Pigeon Food.....	Baltimore.....	12.72	12.55	3.52	3.47	3.20	2.76
24596	" " "	Square Deal Poultry Food	Baltimore.....	11.32	11.50	3.26	3.87	2.91	2.70
24662	H. C. Bridges & Co., Memphis. Tenn.	Cotton Seed Meal.....	Aiken.....	40.45	41.00	7.65	9.00	9.77	
24637	F. W. Brode & Co., Memphis, Tenn.	Owl Brand Pure Cotton Seed Meal	Baltimore.....	38.52	41.00	7.26	6.00	10.23	10.00
24623	J. J. Buffington & Co., Baltimore, Md.	Buff Brand Scratch Feed.....	Baltimore.....	11.41	10.00	2.93	2.50	2.78	5.00
24643	W. J. Byrnes & Co., Chicago, Ill.	Royal Poultry Feed.....	Baltimore.....	11.23	10.00	2.95	3.00	2.63	5.00
24638	Chapin & Co., Hammond, Ind.	Ajax Flakes.....	Forest Hill	30.63	30.00	13.58	12.00	12.47	

24623	J. J. Billington & Co., Baltimore, Md.	Buff Brand Scratch Feed	Baltimore	11.41	10.00	2.93	2.50	2.78	5.00
24643	W. J. Byrnes & Co., Chicago, Ill.	Royal Poultry Feed	Baltimore	11.23	10.00	2.95	3.00	2.63	5.00
24638	Chapin & Co., Hammond, Ind.	Ajax Flakes	Forest Hill	30.63	30.00	13.58	12.00	12.47	
24667	" " "	Unicorn Dairy Ration	Perryman	26.06	26.00	7.45	5.50	8.97	
24654	Consumers Cotton Oil Co., Tarboro, N. C.	Prime Cotton Seed Meal	Baltimore	40.63	41.00	7.43	6.00	12.54	
24618	Corn Products Refining Co., New York, N. Y.	Buffalo Gluten Feed	Hampstead	23.78	23.00	2.72	2.00	7.37	8.50
24597	Corn Mills Co., St. Louis, Mo.	Nutro Hen Feed	Baltimore	10.71	10.00	3.20	3.50	2.01	5.00
24588	Cyphers Incubator Co., Buffalo, N. Y,	Developing Food	Baltimore	10.27	10.00	1.89	3.00	1.83	3.20
24639	Dewey Bros. Co., Blanchester, Ohio	Engle Three Grains	Forest Hill	29.22	30.00	13.55	10.00	9.00	
24585	Albert Dickinson Co., Chicago, Ill.	Queen Poultry Mash	Baltimore	10.88	11.00	3.96	2.50	8.11	10.00
24589	T. A. Dinsmore & Co., Baltimore, Md.	Flax Seed Oil Meal	Baltimore	31.41		7.59		8.99	
24590	" " "	Ideal Horse Feed	Baltimore	9.21		1.84		3.89	
24660	Jonas F. Eby & Son, Lancaster, Pa.	Crystaloid Dairy Feed	Lineboro	19.31	16.50	8.64	3.50	11.20	12.00
24606	H. D. Eidman & Bro., Baltimore, Md.	Cotton Seed Meal	Baltimore	40.45		9.03		10.38	
24598	Jno. W. Eshelman, Lancaster, Pa.	Hen Feed	Hyattsville	9.04	7.00	2.23	2.00	1.67	7.00
24644	Farmers Cotton Oil Co., Wilson, N. C.	Cotton Seed Meal	Baltimore	42.82	38.62	8.13	4.00	9.19	10.00
24668	J. M. Frisch & Co., Baltimore, Md.	Cotton Seed Meal		38.96	41.00	7.73	8.00	12.17	
24580	" " "	Prime Cotton Seed Meal	Baltimore	41.51	41.00	10.58	8.00	7.19	
24655	" " "	Pure Dried Brewers Grains	Baltimore	33.43	27.00	6.08	7.00	10.49	13.00
24645	" " "	Pure Old Process Oil Meal	Baltimore	32.03	30.00	6.63	5.00	8.62	5.00
24656	Fritz Co., Philadelphia Pa.	Beef Scrap for Poultry	Baltimore	51.86	50.00	12.24	8.00	.57	1.00
24646	J. J. George & Co., Baltimore, Md.	Farmers Choice Dairy Feed	Baltimore	15.23	14.00	3.45	4.00	20.69	
24607	" " "	Poultry Feed	Baltimore	11.76	9.00	2.86	2.00	2.72	2.00
24608	" " "	Poultry Mash	Baltimore	22.03	21.38	4.80	6.60	10.04	10.88
24578	Great Western Cereal Co., Chicago, Ill.	Boss Feed	Barnesville	9.04	8.00	3.71	3.25	10.12	11.00
24614	Hoge & McDowell Co., Washington, D. C.	"Columbia" Alfalfa Dairy Feed	Silver Spring	17.20	16.50	3.68	3.30	17.17	14.00
24615	" " "	"Columbia" Alfalfa Horse Feed	Silver Spring	12.64	12.00	3.84	5.12	11.09	13.00
24666	Humphreys Godwin Co., Memphis, Tenn.	Cotton Seed Meal	Westminster	38.79	38.62	8.32	6.00	9.28	
24579	H—O Co., Buffalo, N. Y.	Poultry Feed	Silver Spring	17.64	17.00	3.17	5.50	7.83	9.00

ANALYSIS OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract.		Crude Fibre.	
				FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
24661	International Sugar Feed Co., Minneapolis, Minn.	Special Molasses Feed..	Snow Hill.....	14.13	12.50	6.28	3.50	11.23	12.00
24663	Keeton-Krueger Co., Atlanta, Ga.	Crown Brand Cotton Seed Meal	Baltimore.....	42.56	38.62	7.15	6.00	7.81	12.00
24636	C. A. Krause Milling Co. Milwaukee, Wis.	Badger Dairy Feed.....	Perryman	19.31	16.00	2.46	2.00	13.38	
24647	Guy G. Major Co., Toledo, Ohio	Old Process Oil Meal...	Baltimore.....	33.05	30.00	7.05	5.00	8.19	2.00
24616	D. B. Martin Co., Philadelphia, Pa.	Beef Meal.....	Silver Spring..	62.12		13.51		2.42	
24609	Meyer& Stisser Co., Baltimore Md.	Ground Beef Scrap for Poultry.....	Baltimore.....	54.08	50.00	12.78	10.00	1.69	1.00
24648	Joel Moores & Co., Baltimore, Md.	Ground Beef Cracklings	Baltimore.	59.76	55.00	13.33	12.00	2.13	
24613	North Carolina Cotton Oil Co., Henderson, N. C.	Cotton Seed Meal.....	Silver Spring..	39.31	38.62	7.88	4.00	10.65	10.00
24625	North-West Mills Co., Winona, Minn.	Sugarota Dairy Feed...	Laurel	20.80	16.50	4.10	3.50	12.91	
24600	Ohio Cereal Co., Circleville, Ohio.	Esmeralda.....	Baltimore.	11.06	10.00	5.09	4.30	2.22	3.00
24592	Ohio Feed Mills, Cleveland, Ohio.	Glutena Meal.....	Upper Marlbro.	8.60		2.25		3.55	
24627	Omaha Alfalfa Milling Co., Omaha, Neb.	Perfection Horse Feed..	Baltimore.	13.60	10.50	2.03	2.00	14.14	12.00
24610	Park & Pollard Co., Boston, Mass.	Dry Mash Feed.....	Baltimore.	20.71	20.00	5.15	3.00	9.70	10.00
24601	" " "	Growing Feed.....	Baltimore.	13.95	14.00	5.37	3.12	6.92	10.00
24658	M. C. Peters Mill Co., Omaha, Neb.	Arab Horse Feed.....	Annapolis	10.71	9.00	2.77	2.00	9.60	15.00
24659	" " "	June Pasture.....	Annapolis	10.97	10.00	1.48	1.50	17.08	26.00
24649	Purity Milling Co., Manhattan, Kans.	Alfalfa Molasses Feed..	Baltimore	12.90	11.00	2.65	.50	14.77	20.00
24632	Quaker Oats Co., Chicago, Ill.	Blue Ribbon Feed.....	Cumberland. ..	26.32	25.00	5.07	4.00	10.84	9.00
24626	" " "	Schumacher Special....	Baltimore.....	[illegible]	[illegible]	4.17	3.25	[illegible]	[illegible]

an, Kans.										
24632	Quaker Oats Co., Chicago, Ill.	Blue Ribbon Feed.....	Cumberland. ..	26.32	25.00	5.07	4.00	10.84	9.00
24626	" " "	Schumacher Special....							
		.....	Baltimore	[illegible]	[illegible]	4.17	3.25	[illegible]	[illegible]
24633	" " "	Schumacher Stock Feed	Cumberland. ..	11.62	10.00	3.47	3.25	10.22	10.00
24650	Ralston Purina Co., St. Louis, Mo.	Chicken Chowder.....	Catonsville	19.83	17.00	4.43	3.00	7.66	6.00
24628	" " "	Protena Dairy Feed....	Baltimore.	21.24	20.00	5.15	3.50	15.06	
24586	" " "	Purina Molasses Feed..	Baltimore.	10.44	10.00	3.16	2.50	10.31	12.00
24664	Rankin & Kane, Baltimore Md.	Cotton Seed Meal.....	Baltimore.	43.91		8.22		7.97	
24602	W. G. Scarlett & Co., Baltimore, Md.	Oriole Brand H. G..... Poultry Feed.....	Baltimore	11.93	11.67	3.60	3.37	4.00	4.50
24603	" " "	Oriole Brand H. G..... Poultry Mash.....	Baltimore	20.45	15.00	4.50	3.00	8.12	11.00
24619	C. S. Schermerhorn & Son, Baltimore, Md.	Old Process Oil Meal...	Medford.....	32.82	31.50	6.87	7.00	8.50	10.00
24629	" " "	Prime Cotton Seed Meal	Baltimore	42.30	41.00	8.53	8.00	10.38	12.00
24651	W. A. Simpson & Co., Baltimore, Md.	Champion Brand Beef Scraps	Baltimore	50.02	50.00	12.11	10.00	1.16	1.00
24604	" " "	Champion Brand Scratch Feed	Baltimore	11.41	10.00	3.14	2.75	2.60	2.50
24605	" " "	Ground Beef Scrap for Poultry.....	Baltimore	51.08	50.00	11.55	8.00	1.39	1.00
24591	W. N. Smith, Baltimore, Md.	Cotton Seed Meal.....	Smithsburg....	41.86	41.00	7.87	7.00	7.51	9.00
24665	Southern Cotton Oil Co., Charlotte, N. C.	Cotton Seed Hull & Meal Mixture	Baltimore	17.20	17.00	3.24	3.00	31 89	40.00
24630	Southern Fiber Co., Portsmouth, Va.	Cotton Seed Feed Meal.	Baltimore	21.24	22.00	4.04	4.00	23.65	22.00
24652	" " "	Ko Bos Dairy Feed.....	Baltimore	17.55	16.00	4.35	3.10	28.75	32.00
24611	Sw ift & Co., Kearny, N. J.	Digester Tankage.....	Baltimore	55.04	60.00	9.11		2.14	
24657	" " "	Special Meat Scraps....	Baltimore	48.35	50.00	11.96	8.00	2.42	
24620	Western Grain Products Co., Hammond, Ind.	Hammond Dairy Feed..	Dickerson	17.11	16.50	4.46	3.50	9.58	
24582	" " "	Hammond Horse Feed..	New Windsor..	11.93	12.00	4.40	2.80	9.90	11.00
24631	R. A. Wooldridge Co., Baltimore, Md.	Beef Scrap for Poultry.	Baltimore.	62.91	55.00	12.23	10.00	2.52	3.00

Malt Sprouts are the sprouts of the barley grain. If the sprouts are derived from any other malted cereal, the source must be designated.

Meal is the clean, sound, ground product of the entire grain, cereal or seed which it purports to represent: Provided, that the following meals, qualified by their descriptive names, are to be known as, viz.: **Corn Germ Meal** is a product in the manufacture of starch, glucose and other corn products and is the germ layer from which a part of the corn oil has been extracted. **Linseed Meal** is the ground residue after extraction of part of the oil from the ground flaxseed.

Meat Scrap and Meat Meal are the ground residues from animal tissue exclusive of hoof and bone. If they contain any considerable amount of bone, they must be designated meat and bone scrap, or meat and bone meal. If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Oat Groats are the kernels of the oat berry with the hulls removed.

Oat Hulls are the outer chaffy coverings of the oat grain.

Oat Middlings are the floury portions of the oat groat obtained in the milling of rolled oats.

Oat Shorts are the covering of the oat grain lying immediately inside the hull, being a fuzzy material carrying with it considerable portions of the fine floury part of the groat obtained in the milling of rolled oats.

Red Dog is a low grade wheat flour containing the finer particles of bran.

Rice Bran is the cuticle beneath the hull.

Rice Hulls are the outer chaffy coverings of the rice grain.

Rice Polish is the finely powdered material obtained in polishing the kernel.

Screenings are the smaller imperfect grains, weed seeds and other foreign material having feeding value, separated in cleaning the grain.

Shipstuff or Wheat Mixed Feed is a mixture of the products other than the flour obtained from the milling of the wheat berry.

Shorts or Standard Middlings are the fine particles of the outer and inner bran separated from bran and white middlings.

Wheat Bran is the coarse outer coatings of the wheat berry.

Wheat White Middlings or white middlings are that part of the offal of wheat intermediate between shorts or standard middlings and red dog.